

APA059Hu01 200µg

Active Interleukin 12A (IL12A)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

12th Edition (Revised in Aug, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Arg23~Ser219

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 50µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 6.0

Predicted Molecular Mass: 29.2kDa

Accurate Molecular Mass: 33kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in ddH₂O to a concentration of 0.1-0.4 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

```
                RNLPVATP DPGMFPCLHH SQNLLRAVSN  
MLQKARQTLF FYPCTSEEID HEDITKDKTS TVEACLPLEL TKNESCLNSR  
ETSFITNGSC LASRKTSFMM ALCLSSIIYED LKMYQVEFKT MNAKLLMDPK  
RQIFLDQNMML AVIDELMQAL NFNSETVPQK SSLEEPDFYK TKIKLCILLH  
AFRIRAVTID RVMSYLNAS
```

[ACTIVITY]

human IL12A is a subunit of interleukin 12, a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. Interleukin 12 is a disulfide-linked heterodimer composed of the 40 kD cytokine receptor like subunit encoded by this gene, and a 35 kD subunit encoded by IL12A. This cytokine is expressed by activated macrophages that serve as an essential inducer of Th1 cells development. Interleukin 12A can combine with Epstein Barr Virus Induced Protein 3 (EBI3). Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human IL12A and recombinant human EBI3. Briefly, IL12A were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to EBI3-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-IL12A pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 µL stop solution to the wells and read at 450 nm immediately.

The binding activity of recombinant human IL12A and recombinant human EB13 was shown in Figure 1, the EC50 for this effect is 38.3 ng/mL.

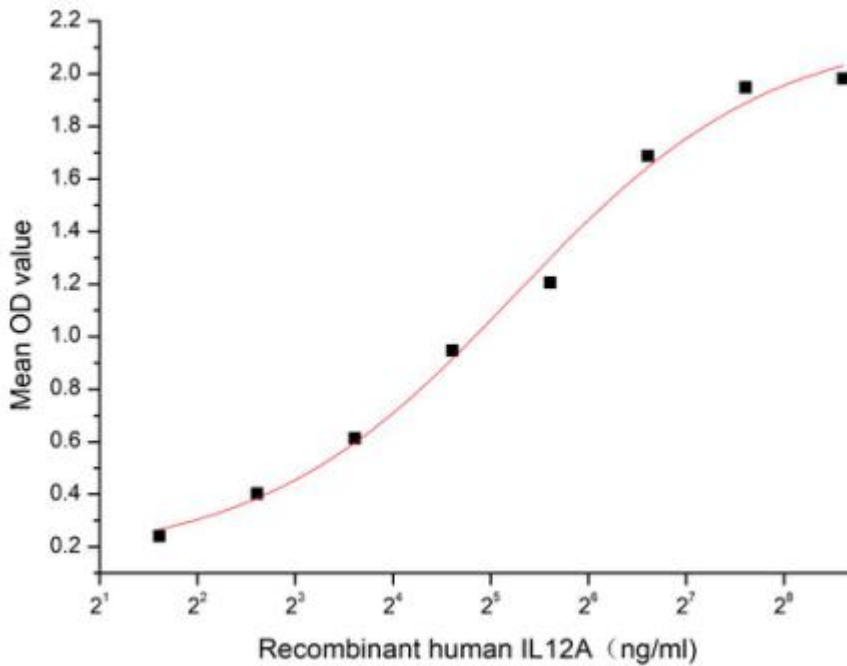


Figure 1. The binding activity of recombinant human IL12A and recombinant human EB13

[IDENTIFICATION]

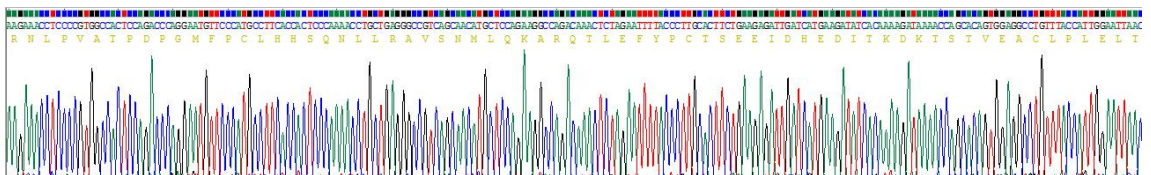


Figure 2. Gene Sequencing (extract)

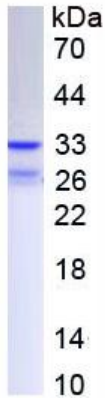


Figure 3. SDS-PAGE

Sample: Active recombinant IL12A, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.